

Communication at the Heart of Education

Genese Warr-Leeper, Ph.D.
Faculty of Health Sciences
University of Western Ontario

We can expect language disorders to comprise the largest handicapping condition in the schools. Of the total school population JK-12, we can expect:

1. 4.73% will be labelled Learning Disabled with 90%-100% of these children showing language disorders
2. 1.68% will be labelled Developmentally Disabled with 85% of these children showing language disorders
3. 1% will be labelled Emotionally Handicapped with 70% of these children showing language disorders

The **most conservative** estimate of the extent of the language problems would be 6,5-10% of the total school population JK-12. (Casby, 89).

One may ask why we should be concerned about language disorders. There are at least 3 reasons which are well-documented:

1. Language provides the main method of establishing and maintaining social relationships. Psychiatric disorders are more common in language disordered than normal language learning children (Cantwell and Baker, 1991; Waller, Sollad, Sander and Kunicki, 1983, Warr-Leeper, 1994). It is clear that poorly developed language skills are strongly associated with life-long difficulties in psycho-social development (Weiner, 1985).
2. Language constitutes a principal means of organizing behaviour and is central to the normal acquisition of many cognitive and academic skills, particularly literacy. Language is the medium of instruction in the classroom (Berlin, Blank and Rose, 1980). Problems in comprehension and production of oral and written language result in academic failure which are not alleviated over time (Weiner, 1985).
3. As the language-delayed child ages, the gap between himself/herself and his/her peers widens (Wiig and Semel, 1984, Nelson, 1991). Thus, the longer the child remains unmanaged, the more pronounced the delay becomes and the more pervasive the impact.
 - Speech and language services are **indispensable**, not incidental, in educational settings, particularly for **supporting reading** and **writing** and **social** learning.

The **most common** communication disorder is **language impairment**. You may ask what is language. **Language is** simply the **invisible information we all carry in our heads that allows us to understand the thoughts of others and express our own thoughts**. This may be accomplished through a **variety of mediums**, including speaking, listening, reading, writing, or hand signals as in sign language. The child with language impairment will have poorly developed language information. This disability often is **not superficially evident**, indeed some children may appear normal in conversational language since they can "talk a blue streak." The devastating evidence of their disability, however, **becomes apparent in inability to adapt to and learn** in the **classroom** where they must **listen, read, speak and write** and in failed **social** interactions so critically dependent on language skills.

➤ Oral Language and Literacy Development

- Level of **oral language** skill is **highly predictive** of **poor reading** development and warrants aggressive intervention to **prevent** reading failure
- A large body of research provides **strong empirical support** for **link between language and reading disabilities** (Catts, 1993). Longitudinal studies of children identified as speech and language impaired have consistently verified that these children are at risk for reading problems.
- Large epidemiologic study of **kindergarten** children found **5 factors** that were highly **predictive** of reading difficulties by **grade 2: Letter Identification, Sentence Imitation, Mother's Education, Deletion of syllable or sound task, Rapid Automated Naming of Animals task** (Catts, Fey, Zhang, & Tomblin, 2001).
- Measures of **syntactic production and language comprehension before school entry predicted reading achievement** (Bishop & Adams, 90; Meyuk, Chesnick, Liebergott, Korngold, D'Agostino, & Belanger, 91; Tallal, Curtiss, and Kaplan, 89).
- **Over 70% of poor readers in grade 2 have a history of language deficits in kindergarten.** Most of these children had problems in both oral language and phonological processing abilities in kindergarten.
- Reading disorders are directly associated with behavioural disorders and language disorders. The **relationship between language disorders and behavioural disorders**, however, may require the **mediation** of a **reading disorder** (Tomblin, Zhang, & Buckwalter, 00).
- 4 ½ - 6 year old children with **language impairments performed more poorly** than typical peers on tasks measuring knowledge of **rhyme, letter names, and concepts related to print.** (terms such as "letter" and "word" as well as reading related vocabulary (first, last, capital). These are skills known to be important to learning to decode. Also evident were difficulties in linguistic skills measures during story reformulation in the areas of **total events included, information recalled, and use of linguistic structures** (e.g., average t-unit length, total number of words, and number of different words). These are skills known to be important to comprehension of what is decoded (Boudreau & Hadberg, 99).
- **Problems in oral language domains** were approximately **three to five times greater** among **poor readers** than among good readers. **Poor readers** have a **much higher percentage of receptive** (57.4%) and **expressive** (50.3%) **language deficits than good readers** (11.8% and 12.2%, respectively). (Catts, Fey, & Tomblin, 99)
- Children with **poor reading comprehension in early grades** are **likely** to become **more deficient** as they **progress through the grades** (Hoover & Gough, 1990).
- Some investigators have taken the strong position that **deficits in oral language (especially syntax) in poor readers may be the foundation of problems in phonological processing** (Gottardo et al., 1996; Shankweiler et al., 1995)
- **Spelling** shows a **similar course** of acquisition to **reading** (Ehri, 2000). **Spelling** skill is **rooted** in the development of **phonological representations of words**, requiring continued experience with print for children to learn about more complex orthographic and morphological conventions of language (Treiman & Bourassa, 2000). **Stage theories** best explain development of spelling beginning at kindergarten up to grade 6 (Ehri, 1986).
- **Phonological deviations** evident in **speech** during development are **similar to spelling** deviations observed during spelling development (Hoffman & Norris, 1989). A **predisposition** for spelling problems may exist in children who have **histories of severe expressive phonological deficiencies** (Clarke-Klein, 1994).

➤ Oral Language and Behaviour

- Because the **majority** of children with **behavioural disorders (65%)** also carry a **second diagnosis**, the presence of an **array of problems** in any one child may be considered standard (Offord, Boyle & Racine, 1991).
- The **comorbidity of language disorders, psychiatric problems, learning disabilities and attention deficit hyperactivity/disorder** has led researchers to conclude that **linguistic difficulties "may in fact be a common background factor" which is of the utmost "phenomenologic and etiologic" importance** (Cantwell & Baker, 1991, pgs. 93 & 94).
- A community study of **1,655 five year olds** reported that of those with **speech and language impairments**, almost **60%** also received a **psychiatric diagnosis**, compared to 12% of a control group (Beitchman, 1985).
- The consensus of studies focussing **preschool populations** (Love & Thompson, 1988; Chess & Rosenberg, 1974) or outpatient populations from psychiatric or speech and language clinics (Baker & Cantwell, 1982; Cohen, Davine, & Meloche-Kelly, 1989) is that **language disorders are as common among children with psychiatric problems as psychiatric problems are among language disordered children** (Cantwell & Baker, 1991). Range of **prevalence 40-65%** (Chess & Rosenberg, 1974; Gualtieri, Koriath, Van Bourgondien & Seleeby, 1983; Love & Thompson, 1988).
- The presence of **weak language skills** in the **preschool years predicts** later **behavioural disorders** during the **school years** (Stevenson, Richman & Graham, 1985).
- The consensus of studies focussing on **school-age children** (Camarata, Hughes and Ruhl, 1988); Minuitti, 1991; Warr-Leeper, et al., 1994) is that the **more significant the behavioural difficulties, the more significant the language impairments**. . Prevalence ranges from **28-89%** which a the upper level is 10 times higher than in the general population.
- Although **receptive and expressive language disorders** are often present in children with antisocial or conduct disordered, language disorders as **unsuspected** and thus **untreated** (Cohen et al., 1989; Cohen, 1990; Mack & Warr-Leeper, 1992; Warr, Wright, & Mack, 1994).
- It appears the **overwhelming behavioural disorders** of these children **mask detection** of significant **language disorders**.
- The **likelihood** of a **behavioural disorder co-occurring** with a **language impairment** is significantly **increased** in the presence of a **reading disorder** (Tomblin, Zhang, & Buckwalter, 00). A full **52% of language impaired** children are **reading disordered** compared to **9% of control** and **29% of language impaired** children are **behaviourally disordered** compared to **19 % of controls**.
- **Common Language Problems**
 - ▶ Consistent **difficulties** in **listening**, particularly for **decontextualized** material which must be processed quickly.

- ▶ **Difficulties in understanding multiple meanings** of words and figures of speech.
- ▶ **Difficulties in inferencing** (filling-in) for missing information.
- ▶ **Difficulties in producing syntactically complex sentences.**

- **Behaviourally disordered children with language impairments:**

- ▶ **Auditory comprehension** deficits at age 5 showed **increased symptoms of hyperactivity 7 years later.**
- ▶ **Long-term problems educationally, socially, and vocationally** are common and **persist into adulthood** (Beitchman et al., 1994; Johnson, et al., 1999).
- ▶ Children with a history of pervasive language impairment, particularly when associated with lower SES, are **most at risk for psychiatric symptoms and poor social competence** (Beitchman et al, 1994).
- ▶ Children with behavioural disorders may be **school refusers** due to the academic and social demands of the school environment (Naylor, et al, 94).

⇒ Redmond (2002) concluded that **everyday manifestation of receptive and expressive language problems** may be **misinterpreted as symptoms supporting the diagnosis of socioemotional pathology.** Accurate language assessment and effective treatment for children with behavioural disorders is required. The sophisticated verbal skills required for many of the behavioural assessments puts children with language impairments at a distinct disadvantage.

- ▶ **Educational Benefits of Speech and Language Services:**

- Numerous important **educational benefits** have been **demonstrated** with speech and language services for students with a wide variety of special needs and for students *at risk* for poor school achievement. Speech-language pathologists are **preventionists, collaborator, & interventionists** in **oral** language and in **written** language
- There is clear evidence that **language intervention is effective** (Nye, Foster, and Seaman, 1987) and that the **earlier treatment** is initiated, the **better the outcome** (Schery, 85).
 - ☞ **Significant gains in reading skills** for elementary school children (Hoffman & Norris, 1994).
 - ☞ **Phonological awareness training** in children with **language impairments in preschool and kindergarten** has revealed that children who have participated in early training programs have **performed better on reading measures in first and second grade than have children without** phonological awareness intervention (Magnusson & Naucler, 1992; Warrick, Rubin, & Rowe-Walsh, 1993)
 - ☞ **Significant improvements in reading accuracy and comprehension** with **spoken language training in phonological processing and semantic-syntactic** skills with 10-12 year old children evidencing severe difficulties in written and higher-level spoken language (Gillon & Dodd, 95)..
 - ☞ **Significant gains in vocabulary use and generalization** for young children when **vocabulary** training was integrated into the classroom setting by the SLP and teacher. (Wilcox, Kouri, & Caswell, 91).
 - ☞ **Significantly greater** acquisition of **curricular vocabulary** for **typically developing students** with a **collaborative or classroom-based** assistance from the **SLP** than with only regular instruction from the **classroom teacher.** **Significant acquisition of curricular vocabulary** for children with **speech and language impairments** when

the **SLP** taught **collaboratively** with the classroom teacher (Throneburg, Calvert, Sturm, Paramboukas, & Paul, 2000).

- ☞ **Significant improvements in basic concept acquisition** (Ellis, Schlaudecker, & Regimbal, 95)
- ☞ **Meaningful improvements in adaptive behaviour** in the **classroom** (Schery & O'Connor, 1992)
- ☞ **Significantly higher scores on listening & writing; higher abilities in understanding vocabulary and cognitive-linguistic concepts; increased writing skill development for producing relevant sentences with correct mechanics and spelling; improved ability to follow directions** with new concepts, and **heightened phonemic awareness**. **Carry-over** of increased student **verbal skills** within **other curricular areas** was also evident. (Farber & Klein, 99).
- ☞ **Improved student questioning & problem solving** skills (Kaufman, Prelock, Weiler, Creaghead, & Donnelly, 94)
- ☞ **Substantial reductions** in the **drop-out rate** for students in secondary school (Larson & McKinley, 1995)
- ☞ For **at risk children, lasting benefits representing a significant savings** to the social support system and society (Schweinhart, Berrueta-Clement, Barnett, Epstein & Weikart, 1985; Warr-Leeper, 01).
- ☞ **TVDSB** preliminary data from the Partnership Schools showed programming **improved phonological awareness** scores, a critical attainment for learning to read. In addition, **programs implemented** in small groups by the **SLP** or in collaboration with the SLP resulted in the **largest gains** for children at risk for reading failure.
- ☞ **TVDSB** data from a brief oral language and then text-embedded program resulted in **significant improvement in reading** for older elementary students with resistant reading difficulties.

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